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Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=5; day=20; hr=16; min=33; sec=18; ms=784;]

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Output Set:

Actual SeqID Count: 89

[illegible]

Input Set:

Output Set:

Started: 2008-05-02 14:58:00.513
Finished: 2008-05-02 14:58:06.479
Elapsed: 0 hr(s) 0 min(s) 5 sec(s) 966 ms
Total Warnings: 77
Total Errors: 42
No. of SeqIDs Defined: 89
Actual SeqID Count: 89

| Error code | Error Description |
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| E 257 | Invalid sequence data feature in <221> in SEQ ID (3) |
| E 257 | Invalid sequence data feature in <221> in SEQ ID (3) |
| E 257 | Invalid sequence data feature in <221> in SEQ ID (3) This error has occurred more than 20 times, will not be displayed |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (16) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (17) |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (26) |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (28) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (29) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (30) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (31) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (32) This error has occurred more than 20 times, will not be displayed |

SEQUENCE LISTING

<110> JONSON, LARS
 REHFELD, JENS F.
 JOHNSEN, ANDERS H.

<120> METHODS FOR INCREASING THE PRODUCTION OF A
 RECOMBINANT POLYPEPTIDE FROM A HOST CELL

<130> 030307-0256

<140> 10528563

<141> 2005-10-11

<150> PCT/DK03/00609

<151> 2003-09-19

<150> DK PA200201391

<151> 2002-09-20

<160> 89

<170> PatentIn Ver. 3.3

<210> 1

<211> 5

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Pitrilysin
 consensus sequence

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<221> MOD_RES

<222> (2)..(3)

<223> Variable amino acid

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His Xaa Xaa Glu His
 1 5

<210> 2

<211> 46

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Pitrilysin
 consensus sequence

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<221> MOD_RES

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<223> Variable amino acid

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<222> (36)..(37)
<223> Variable amino acid or absent

<220>
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<222> (40)
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<220>
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1 5 10 15
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Xaa Xaa Xaa Asn Ala Xaa Thr Xaa Xaa Xaa Xaa Thr
35 40 45

<210> 3
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<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Pitrilysin
consensus sequence

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<400> 3

Gly Xaa Xaa His Xaa Xaa Glu His Xaa Xaa Xaa Xaa Gly Xaa Xaa Lys

1

5

10

15

Tyr Pro Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30

Xaa Xaa Xaa Xaa Xaa Asn Ala Xaa Thr Xaa Xaa Xaa Xaa Xaa Thr
 35 40 45

<210> 4
 <211> 989
 <212> PRT
 <213> *Saccharomyces cerevisiae*

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 Met Leu Arg Phe Gln Arg Phe Ala Ser Ser Tyr Ala Gln Ala Gln Ala
 1 5 10 15

Val Arg Lys Tyr Pro Val Gly Gly Ile Phe His Gly Tyr Glu Val Arg
 20 25 30

Arg Ile Leu Pro Val Pro Glu Leu Arg Leu Thr Ala Val Asp Leu Val
 35 40 45

His Ser Gln Thr Gly Ala Glu His Leu His Ile Asp Arg Asp Asp Lys
 50 55 60

Asn Asn Val Phe Ser Ile Ala Phe Lys Thr Asn Pro Pro Asp Ser Thr
 65 70 75 80

Gly Val Pro His Ile Leu Glu His Thr Thr Leu Cys Gly Ser Val Lys
 85 90 95

Tyr Pro Val Arg Asp Pro Phe Phe Lys Met Leu Asn Lys Ser Leu Ala
 100 105 110

Asn Phe Met Asn Ala Met Thr Gly Pro Asp Tyr Thr Phe Phe Pro Phe
 115 120 125

Ser Thr Thr Asn Pro Gln Asp Phe Ala Asn Leu Arg Gly Val Tyr Leu
 130 135 140

Asp Ser Thr Leu Asn Pro Leu Leu Lys Gln Glu Asp Phe Asp Gln Glu
 145 150 155 160

Gly Trp Arg Leu Glu His Lys Asn Ile Thr Asp Pro Glu Ser Asn Ile
 165 170 175

Val Phe Lys Gly Val Val Tyr Asn Glu Met Lys Gly Gln Ile Ser Asn
 180 185 190

Ala Asn Tyr Tyr Phe Trp Ser Lys Phe Gln Gln Ser Ile Tyr Pro Ser
 195 200 205

Leu Asn Asn Ser Gly Gly Asp Pro Met Lys Ile Thr Asp Leu Arg Tyr
 210 215 220

Gly Asp Leu Leu Asp Phe His His Lys Asn Tyr His Pro Ser Asn Ala

| | | | | | | |
|-----------------------------------------------------------------|-----|-----|-----|-----|-----|-----|
| 225 | | 230 | | 235 | | 240 |
| Lys Thr Phe Thr Tyr Gly Asn Leu Pro Leu Val Asp Thr Leu Lys Gln | | | | | | |
| | 245 | | 250 | | 255 | |
| Leu Asn Glu Gln Phe Ser Gly Tyr Gly Lys Arg Ala Arg Lys Asp Lys | | | | | | |
| | 260 | | 265 | | 270 | |
| Leu Leu Met Pro Ile Asp Leu Lys Lys Asp Ile Asp Val Lys Leu Leu | | | | | | |
| | 275 | | 280 | | 285 | |
| Gly Gln Ile Asp Thr Met Leu Pro Pro Glu Lys Gln Thr Lys Ala Ser | | | | | | |
| | 290 | | 295 | | 300 | |
| Met Thr Trp Ile Cys Gly Ala Pro Gln Asp Thr Tyr Asp Thr Phe Leu | | | | | | |
| | 305 | | 310 | | 315 | 320 |
| Leu Lys Val Leu Gly Asn Leu Leu Met Asp Gly His Ser Ser Val Met | | | | | | |
| | 325 | | 330 | | 335 | |
| Tyr Gln Lys Leu Ile Glu Ser Gly Ile Gly Leu Glu Phe Ser Val Asn | | | | | | |
| | 340 | | 345 | | 350 | |
| Ser Gly Val Glu Pro Thr Thr Ala Val Asn Leu Leu Thr Val Gly Ile | | | | | | |
| | 355 | | 360 | | 365 | |
| Gln Gly Val Ser Asp Ile Glu Ile Phe Lys Asp Thr Val Asn Asn Ile | | | | | | |
| | 370 | | 375 | | 380 | |
| Phe Gln Asn Leu Leu Glu Thr Glu His Pro Phe Asp Arg Lys Arg Ile | | | | | | |
| | 385 | | 390 | | 395 | 400 |
| Asp Ala Ile Ile Glu Gln Leu Glu Leu Ser Lys Lys Asp Gln Lys Ala | | | | | | |
| | 405 | | 410 | | 415 | |
| Asp Phe Gly Leu Gln Leu Leu Tyr Ser Ile Leu Pro Gly Trp Thr Asn | | | | | | |
| | 420 | | 425 | | 430 | |
| Lys Ile Asp Pro Phe Glu Ser Leu Leu Phe Glu Asp Val Leu Gln Arg | | | | | | |
| | 435 | | 440 | | 445 | |
| Phe Arg Gly Asp Leu Glu Thr Lys Gly Asp Thr Leu Phe Gln Asp Leu | | | | | | |
| | 450 | | 455 | | 460 | |
| Ile Arg Lys Tyr Ile Val His Lys Pro Cys Phe Thr Phe Ser Ile Gln | | | | | | |
| | 465 | | 470 | | 475 | 480 |
| Gly Ser Glu Glu Phe Ser Lys Ser Leu Asp Asp Glu Glu Gln Thr Arg | | | | | | |
| | 485 | | 490 | | 495 | |
| Leu Arg Glu Lys Ile Thr Ala Leu Asp Glu Gln Asp Lys Lys Asn Ile | | | | | | |
| | 500 | | 505 | | 510 | |
| Phe Lys Arg Gly Ile Leu Leu Gln Glu Lys Gln Asn Glu Lys Glu Asp | | | | | | |
| | 515 | | 520 | | 525 | |
| Leu Ser Cys Leu Pro Thr Leu Gln Ile Lys Asp Ile Pro Arg Ala Gly | | | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| 530 | | | | | 535 | | | | | 540 | | | | | | |
| Asp | Lys | Tyr | Ser | Ile | Glu | Gln | Lys | Asn | Asn | Thr | Met | Ser | Arg | Ile | Thr | |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 | |
| Asp | Thr | Asn | Gly | Ile | Thr | Tyr | Val | Arg | Gly | Lys | Arg | Leu | Leu | Asn | Asp | |
| 565 | | | | | 570 | | | | | 575 | | | | | | |
| Ile | Ile | Pro | Phe | Glu | Leu | Phe | Pro | Tyr | Leu | Pro | Leu | Phe | Ala | Glu | Ser | |
| 580 | | | | | 585 | | | | | 590 | | | | | | |
| Leu | Thr | Asn | Leu | Gly | Thr | Thr | Thr | Glu | Ser | Phe | Ser | Glu | Ile | Glu | Asp | |
| 595 | | | | | 600 | | | | | 605 | | | | | | |
| Gln | Ile | Lys | Leu | His | Thr | Gly | Gly | Ile | Ser | Thr | His | Val | Glu | Val | Thr | |
| 610 | | | | | 615 | | | | | 620 | | | | | | |
| Ser | Asp | Pro | Asn | Thr | Thr | Glu | Pro | Arg | Leu | Ile | Phe | Gly | Phe | Asp | Gly | |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 | |
| Trp | Ser | Leu | Asn | Ser | Lys | Thr | Asp | His | Ile | Phe | Glu | Phe | Trp | Ser | Lys | |
| 645 | | | | | 650 | | | | | 655 | | | | | | |
| Ile | Leu | Leu | Glu | Thr | Asp | Phe | His | Lys | Asn | Ser | Asp | Lys | Leu | Lys | Val | |
| 660 | | | | | 665 | | | | | 670 | | | | | | |
| Leu | Ile | Arg | Leu | Leu | Ala | Ser | Ser | Asn | Thr | Ser | Ser | Val | Ala | Asp | Ala | |
| 675 | | | | | 680 | | | | | 685 | | | | | | |
| Gly | His | Ala | Phe | Ala | Arg | Gly | Tyr | Ser | Ala | Ala | His | Tyr | Arg | Ser | Ser | |
| 690 | | | | | 695 | | | | | 700 | | | | | | |
| Gly | Ala | Ile | Asn | Glu | Thr | Leu | Asn | Gly | Ile | Glu | Gln | Leu | Gln | Phe | Ile | |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 | |
| Asn | Arg | Leu | His | Ser | Leu | Leu | Asp | Asn | Glu | Glu | Thr | Phe | Gln | Arg | Glu | |
| 725 | | | | | 730 | | | | | 735 | | | | | | |
| Val | Val | Asp | Lys | Leu | Thr | Glu | Leu | Gln | Lys | Tyr | Ile | Val | Asp | Thr | Asn | |
| 740 | | | | | 745 | | | | | 750 | | | | | | |
| Asn | Met | Asn | Phe | Phe | Ile | Thr | Ser | Asp | Ser | Asp | Val | Gln | Ala | Lys | Thr | |
| 755 | | | | | 760 | | | | | 765 | | | | | | |
| Val | Glu | Ser | Gln | Ile | Ser | Lys | Phe | Met | Glu | Arg | Leu | Pro | His | Gly | Ser | |
| 770 | | | | | 775 | | | | | 780 | | | | | | |
| Cys | Leu | Pro | Asn | Gly | Pro | Lys | Thr | Ser | Asp | Tyr | Pro | Leu | Ile | Gly | Ser | |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 | |
| Lys | Cys | Lys | His | Thr | Leu | Ile | Lys | Phe | Pro | Phe | Gln | Val | His | Tyr | Thr | |
| 805 | | | | | 810 | | | | | 815 | | | | | | |
| Ser | Gln | Ala | Leu | Leu | Gly | Val | Pro | Tyr | Thr | His | Lys | Asp | Gly | Ser | Ala | |
| 820 | | | | | 825 | | | | | 830 | | | | | | |
| Leu | Gln | Val | Met | Ser | Asn | Met | Leu | Thr | Phe | Lys | His | Leu | His | Arg | Glu | |

835

840

845

Val Arg Glu Lys Gly Gly Ala Tyr Gly Gly Gly Ala Ser Tyr Ser Ala
 850 855 860

Leu Ala Gly Ile Phe Ser Phe Tyr Ser Tyr Arg Asp Pro Gln Pro Leu
 865 870 875 880

Lys Ser Leu Glu Thr Phe Lys Asn Ser Gly Arg Tyr Ile Leu Asn Asp
 885 890 895

Ala Lys Trp Gly Val Thr Asp Leu Asp Glu Ala Lys Leu Thr Ile Phe
 900 905 910

Gln Gln Val Asp Ala Pro Lys Ser Pro Lys Gly Glu Gly Val Thr Tyr
 915 920 925

Phe Met Ser Gly Val Thr Asp Asp Met Lys Gln Ala Arg Arg Glu Gln
 930 935 940

Leu Leu Asp Val Ser Leu Leu Asp Val His Arg Val Ala Glu Lys Tyr
 945 950 955 960

Leu Leu Asn Lys Glu Gly Val Ser Thr Val Ile Gly Pro Gly Ile Glu
 965 970 975

Gly Lys Thr Val Ser Pro Asn Trp Glu Val Lys Glu Leu
 980 985

<210> 5

<211> 882

<212> PRT

<213> Schizosaccharomyces pombe

<400> 5

Met Asn Tyr Ala Lys Leu Ser Ile Ala Phe Ser Lys Lys Thr Ile Lys
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Thr His Asn Cys Arg Leu Phe Gln Arg Trp Leu His Val Gly Asp Lys
 20 25 30

Val His Asp Phe Arg Val Val Asp Thr Lys Lys Val Pro Glu Leu Gln
 35 40 45

Leu Asn Tyr Thr Arg Leu Lys His Glu Pro Thr Asn Ala Asp Met Ile
 50 55 60

His Leu Asp Arg Glu Asp Pro Asn Ser Val Phe Ser Ile Gly Phe Gln
 65 70 75 80

Thr Pro Ala Glu Asn Asp Glu Gly Ile Pro His Ile Leu Glu His Thr
 85 90 95

Thr Leu Cys Gly Ser Asn Lys Tyr Pro Val Arg Asp Pro Phe Phe Lys
 100 105 110

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Asn | Arg | Ser | Leu | Ala | Thr | Phe | Met | Asn | Ala | Phe | Thr | Ala | Ser | 115 | 120 | 125 | |
| Asp | Phe | Thr | Phe | Tyr | Pro | Phe | Ala | Thr | Val | Asn | Thr | Thr | Asp | Tyr | Lys | 130 | 135 | 140 | |
| Asn | Leu | Arg | Asp | Val | Tyr | Leu | Asp | Ala | Thr | Leu | Phe | Pro | Lys | Leu | Arg | 145 | 150 | 155 | 160 |
| Lys | Leu | Asp | Phe | Leu | Gln | Glu | Gly | Trp | Arg | Phe | Glu | His | Ala | Asp | Val | 165 | 170 | 175 | |
| Asn | Asp | Lys | Lys | Ser | Pro | Ile | Ile | Phe | Asn | Gly | Val | Val | Tyr | Asn | Glu | 180 | 185 | 190 | |
| Met | Lys | Gly | Gln | Val | Ser | Asp | Ser | Ser | Tyr | Ile | Phe | Tyr | Met | Leu | Phe | 195 | 200 | 205 | |
| Gln | Gln | His | Leu | Phe | Gln | Gly | Thr | Ala | Tyr | Gly | Phe | Asn | Ser | Gly | Gly | 210 | 215 | 220 | |
| Asp | Pro | Leu | Ala | Ile | Pro | Asp | Leu | Lys | Tyr | Glu | Glu | Leu | Val | Lys | Phe | 225 | 230 | 235 | 240 |
| His | Arg | Ser | His | Tyr | His | Pro | Ser | Asn | Ala | Lys | Ile | Leu | Ser | Tyr | Gly | 245 | 250 | 255 | |
| Ser | Phe | Pro | Leu | Glu | Asp | Asn | Leu | Ser | Ala | Leu | Ser | Glu | Thr | Phe | Arg | 260 | 265 | 270 | |
| Pro | Phe | Ser | Lys | Arg | Glu | Leu | Asn | Leu | Pro | Asn | Thr | Phe | Leu | Lys | Glu | 275 | 280 | 285 | |
| Phe | Asp | Gln | Glu | Lys | Arg | Val | Val | Glu | Tyr | Gly | Pro | Leu | Asp | Pro | Val | 290 | 295 | 300 | |
| Met | Ala | Pro | Gly | Arg | Gln | Val | Lys | Thr | Ser | Ile | Ser | Phe | Leu | Ala | Asn | 305 | 310 | 315 | 320 |
| Asp | Thr | Ser | Asn | Val | Tyr | Glu | Thr | Phe | Ala | Leu | Lys | Val | Leu | Ser | Lys | 325 | 330 | 335 | |
| Leu | Cys | Phe | Asp | Gly | Phe | Ser | Ser | Pro | Phe | Tyr | Lys | Ala | Leu | Ile | Glu | 340 | 345 | 350 | |
| Ser | Gly | Leu | Gly | Thr | Asp | Phe | Ala | Pro | Asn | Ser | Gly | Tyr | Asp | Ser | Thr | 355 | 360 | 365 | |
| Thr | Lys | Arg | Gly | Ile | Phe | Ser | Val | Gly | Leu | Glu | Gly | Ala | Ser | Glu | Glu | 370 | 375 | 380 | |
| Ser | Leu | Ala | Lys | Ile | Glu | Asn | Leu | Val | Tyr | Ser | Ile | Phe | Asn | Asp | Leu | 385 | 390 | 395 | 400 |
| Ala | Leu | Lys | Gly | Phe | Glu | Asn | Glu | Lys | Leu | Glu | Ala | Ile | Leu | His | Gln | 405 | 410 | 415 | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Met | Glu | Ile | Ser | Leu | Lys | His | Lys | Ser | Ala | His | Phe | Gly | Ile | Gly | Leu | |
| | | | 420 | | | | | | 425 | | | | | | 430 | |
| Ala | Gln | Ser | Leu | Pro | Phe | Asn | Trp | Phe | Asn | Gly | Ala | Asp | Pro | Ala | Asp | |
| | | | 435 | | | | | | 440 | | | | | | 445 | |
| Trp | Leu | Ser | Phe | Asn | Lys | Gln | Ile | Glu | Trp | Leu | Lys | Gln | Lys | Asn | Ser | |
| | | | 450 | | | | | | 455 | | | | | | 460 | |
| Asp | Gly | Lys | Leu | Phe | Gln | Lys | Leu | Ile | Lys | Lys | Tyr | Ile | Leu | Glu | Asn | |
| | | | 465 | | | | | | 470 | | | | | | 475 | |
| Lys | Ser | Arg | Phe | Val | Phe | Thr | Met | Leu | Pro | Ser | Ser | Thr | Phe | Pro | Gln | |
| | | | 485 | | | | | | 490 | | | | | | 495 | |
| Arg | Leu | Gln | Glu | Ala | Glu | Ala | Lys | Lys | Leu | Gln | Glu | Arg | Thr | Ser | Lys | |
| | | | 500 | | | | | | 505 | | | | | | 510 | |
| Leu | Thr | Asp | Glu | Asp | Ile | Ala | Glu | Ile | Glu | Lys | Thr | Ser | Val | Lys | Leu | |
| | | | 515 | | | | | | 520 | | | | | | 525 | |
| Leu | Glu | Ala | Gln | Ser | Thr | Pro | Ala | Asp | Thr | Ser | Cys | Leu | Pro | Thr | Leu | |
| | | | 530 | | | | | | 535 | | | | | | 540 | |
| Ser | Val | Ser | Asp | Ile | Pro | Glu | Thr | Ile | Asp | Glu | Thr | Lys | Leu | Lys | Phe | |
| | | | 545 | | | | | | 550 | | | | | | 555 | |
| Leu | Asp | Ile | Ala | Gly | Met | Lys | Ala | Gln | Trp | Tyr | Asp | Leu | Ala | Ala | Gly | |
| | | | 565 | | | | | | 570 | | | | | | 575 | |
| Leu | Thr | Tyr | Ile | Arg | Leu | Leu | Leu | Pro | Leu | Lys | Asn | Phe | Pro | Glu | Ser | |
| | | | 580 | | | | | | 585 | | | | | | 590 | |
| Leu | Ile | Pro | Tyr | Leu | Pro | Val | Tyr | Cys | Asp | Ala | Cys | Leu | Asn | Leu | Gly | |
| | | | 595 | | | | | | 600 | | | | | | 605 | |
| Thr | His | Ser | Glu | Ser | Ile | Gly | Asp | Leu | Glu | His | Gln | Ile | Arg | Arg | Tyr | |
| | | | 610 | | | | | | 615 | | | | | | 620 | |
| Thr | Gly | Gly | Ile | Ser | Ile | Ser | Pro | Ser | Ala | Val | Thr | Asn | Asn | Ser | Asp | |
| | | | 625 | | | | | | 630 | | | | | | 635 | |
| Val | Ser | Lys | Tyr | Glu | Leu | Gly | Ile | Ala | Ile | Ser | Gly | Tyr | Ala | Leu | Asp | |
| | | | 645 | | | | | | 650 | | | | | | 655 | |
| Lys | Asn | Val | Gly | Lys | Leu | Val | Glu | Leu | Ile | Asn | Lys | Ala | Phe | Trp | Asn | |
| | | | 660 | | | | | | 665 | | | | | | 670 | |
| Thr | Asn | Leu | Ser | Asn | Thr | Asp | Lys | Leu | Ala | Ile | Met | Leu | Lys | Thr | Ser | |
| | | | 675 | | | | | | 680 | | | | | | 685 | |
| Val | Ser | Gly | Ile | Thr | Asp | Gly | Ile | Ala | Glu | Lys | Gly | His | Ser | Phe | Ala | |
| | | | 690 | | | | | | 695 | | | | | | 700 | |
| Lys | Val | Ser | Ser | Ala | Ser | Gly | Leu | Thr | Glu | Lys | Thr | Ser | Ile | Thr | Glu | |
| | | | 705 | | | | | | 710 | | | | | | 715 | |
| | | | | | | | | | | | | | | | 720 | |

Gln Leu Gly Gly Leu Thr Gln Val Lys Leu Leu Ser Gln Leu Ser Arg
725 730 735

Glu Glu Ser Phe Gly Pro Leu Val Glu Lys Leu Thr Ala Ile Arg Glu
740